

C l a i m s:

1. Orthodontic appliance, which consists, in full or in part, of a plastic material having a water absorption capacity and which is impregnated with a water-soluble additive that restrains the formation of plaque.
2. The orthodontic appliance as defined in Claim 1, obtained by
 - moulding the orthodontic appliance from the plastic material;
 - impregnating the orthodontic appliance with the dissolved additive; and
 - drying the orthodontic appliance.
3. The orthodontic appliance as defined in Claim 1 or Claim 2, **characterised in that** the plastic material is moulded by injection moulding.
4. The orthodontic appliance as defined in Claim 1 or Claim 2, **characterised in that** prior to the impregnation process, any volatile components, such as non-polymerised formaldehyde, are driven out from the orthodontic appliance.
5. The orthodontic appliance as defined in Claim 4, **characterised in that** the volatile substances are driven out by leaving the orthodontic appliance to soak in water that has been heated up to a temperature above room temperature, and that the orthodontic appliance is then dried.
6. The orthodontic appliance as defined in Claim 4 or Claim 5, **characterised in that** for driving out the volatile substances, the orthodontic appliance is exposed to a subatmospheric pressure.
7. The orthodontic appliance as defined in Claim 6, **characterised in that** the orthodontic appliance is heated prior to or while being exposed to the subatmospheric pressure.

8. The orthodontic appliance as defined in Claim 7, **characterised in that** the orthodontic appliance is heated up to 40° Celsius to 60° Celsius.
9. The orthodontic appliance as defined in Claim 1 or Claim 2, **characterised in that** the orthodontic appliance is impregnated by leaving it to soak in an aqueous solution of the additive.
10. The orthodontic appliance as defined in Claim 9, **characterised in that** the solution is heated.
11. The orthodontic appliance as defined in Claim 10, **characterised in that** the solution is heated up to 40° Celsius to 60° Celsius.
12. The orthodontic appliance as defined in Claim 1, **characterised in that** the selected additive is one that has an antibacterial effect.
13. The orthodontic appliance as defined in Claim 1, **characterised in that** the orthodontic appliance contains pores in which the additive is deposited.
14. The orthodontic appliance as defined in Claim 13, **characterised in that** the orthodontic appliance contains micropores in which the additive is deposited.
15. The orthodontic appliance as defined in Claim 1 **characterised in that** the plastic material is a polyoximethylene or a polyarylether ketone.
16. The orthodontic appliance as defined in Claim 1, **characterised in that** the additive has a wetting property.
17. The orthodontic appliance as defined in Claim 1, **characterised in that** the additive includes a wetting agent.

18. The orthodontic appliance as defined in Claim 17, **characterised in that** the additive includes an aminofluoride as a wetting agent.
19. The orthodontic appliance as defined in Claim 18, **characterised in that** the wetting agent is N' - octadecyl trimethylenediamine - N,N,N' - tris (2-ethanol) - dihydrofluoride or 9 - octadecenylamine - hydrofluoride.
20. The orthodontic appliance as defined in Claim 1, **characterised in that** the antibacterial additive is tin fluoride or includes tin fluoride.
21. The orthodontic appliance as defined in Claim 20, **characterised in that** the additive includes tin fluoride in combination with an aminofluoride.
22. The orthodontic appliance as defined in Claim 1, **characterised in that** the additive is or includes a derivative of hexamethylene bisguanide, especially chlorohexidine digluconate.
23. The orthodontic appliance as defined in Claim 1, **characterised in that** it is a bracket or a buccal tube.